

REMARKS

Claims 12 to 25 are pending in the present application.

In view of the following, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

With respect to paragraph four (4) of the Office Action, claims 12 to 14, and 16 to 20 were rejected under 35 U.S.C. § 102(b) as anticipated by Kinugasa et al., U.S. Patent No. 5,924,406 (the Kinugasa reference).

As regards the anticipation rejections of the claims, to reject a claim under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (*See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). As explained herein, it is respectfully submitted that the Office Action does not meet this standard, for example, as to all of the features of the claims. Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed subject matter. (*See Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)).

As further regards the anticipation rejections, to the extent that the Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Office must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied art.” (*See* M.P.E.P. § 2112; emphasis in original; and *see Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int’f. 1990)). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic.

While the rejections may not be agreed with as explained herein, to facilitate matters, claim 12 has been rewritten to better clarify the claimed subject matter.

Claim 12, as presented, provides the additional feature that for an combustion engine or for an electrical machine, the operating point includes at least one of a setpoint speed and a setpoint torque, and includes a setpoint ratio for a transmission. In this regard, the present patent application discloses a map-based operating strategy in paragraph [0034] of the present patent application. This operating strategy is used to determine either the setpoint speed or

the setpoint torque of the combustion engine and/or the electrical machine, and a setpoint ratio for the transmission.

The latter happens with the aid of families of shift maps as described in paragraph [0036] of the present application. After determining the setpoint ratio for the transmission, the shift maps are further used in conjunction with the discretized electrical power, the speed of the vehicle and the desired output torque to obtain the setpoint speed or setpoint torque. Thus, the method of claim 12, as presented, is simply not disclosed by the applied reference(s).

Even if the Kinugasa reference might indicate that a gear position of an automatic transmission device is controlled by a transmission control device using one of a plurality of shift patterns, in which shift patterns are configured for different driving situations (for example, driving on a level road, climbing an uphill road or descending a downhill road), *it does not disclose that the shift pattern is chosen based on the required electrical power – that is, one in which the setpoint ratio is determined from a characteristic map, which is selected from a plurality of characteristic maps on the basis of the required power.*

The presently claimed subject matter concerns optimizing not only the operating point of a combustion engine, but the whole drive train (consisting of the engine, the transmission and eventually an electrical machine). This is not disclosed by the Kinugasa reference. The Kinugasa reference also does not disclose that the operating point includes a setpoint speed or a setpoint torque of a combustion engine or an electrical machine and a setpoint ratio for a transmission.

Still further, claim 12 relates to a method for setting an operating point of a drive train whose purpose is to provide a mechanical and an electrical power output, and includes the features of *selecting characteristic map from a plurality of characteristic maps on the basis of a required electrical power by power consumers*, distinct from an energy storage device, of an on-board electrical system; and as a function of the characteristic map, selecting the operating point on the basis of a plurality of at least one of kinematic and dynamic degrees of freedom.

The Kinugasa reference does not identically disclose (or even suggest) the feature of *selecting characteristic map from a plurality of characteristic maps on the basis of a required electrical power by power consumers*, as provided for in the context of claim 12. Instead, the Kinugasa reference merely refers to specific fuel consumption maps

“corresponding to the operating conditions of the internal combustion engine.” (Kinugasa, col. 12, lines 9 to 13 (emphasis added)).

In this regard, the Kinugasa reference defines “operating conditions of the internal combustion engine” as including “an engine speed, an intake air flow rate, a load of the internal combustion engine and a throttle valve opening,” and as separate and distinct from operating conditions of the auxiliary equipment. (Kinugasa, col. 4, lines 1 to 4). Accordingly, the Kinugasa reference merely indicates that the specific fuel consumption map “is set as a function of the engine speed and the base output torque ... [or] as a function of, for example, the kind of the internal combustion engine, the load of the internal combustion engine, the intake air flow rate and the torque.” (Kinugasa, col. 11, line 64 to col. 12, line 4).

Therefore, the Kinugasa reference merely refers to setting the specific fuel consumption map as a function of operating conditions of the internal combustion engine, and consequently does not identically disclose (or even suggest) the feature of *selecting characteristic map from a plurality of characteristic maps on the basis of a required electrical power by power consumers*, as provided for in the context of claim 12.

Further, after a specific fuel consumption map has already been chosen corresponding to the operating conditions of the internal combustion engine, the Kinugasa system determines the suitability for driving auxiliary equipments. (Kinugasa, col. 5, line 65 to col. 6, line 4). However, this determination may merely alter the operating region within the previously-chosen specific fuel consumption map, but is not a basis for choosing the previously-chosen specific fuel consumption map. (Kinugasa, col. 6, lines 5 to 65; and Figures 7A, 7B).

Therefore, the Kinugasa reference does not identically disclose (or even suggest) the feature of *selecting characteristic map from a plurality of characteristic maps on the basis of a required electrical power by power consumers*, as provided for in the context of claim 12.

Accordingly, it is respectfully submitted that claim 12, as presented, is allowable, as are its dependent claims 13, 14, and 16 to 20.

With respect to paragraph six (6) of the Office Action, claim 21 was rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as unpatentable over the Kinugasa reference.

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As explained above, the Kinugasa reference does not disclose (or even suggest) all of the features of claim 12, as presented. Accordingly, claim 12 is allowable, as is its dependent claim 21. Withdrawal of the rejections is therefore respectfully requested.

With respect to paragraph seven (7) of the Office Action, claims 15, 19, and 22 to 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over the Kinugasa reference.

As explained above, the Kinugasa reference does not disclose (or even suggest) all of the features of claim 12. Accordingly, claim 12 is allowable, as are its dependent claims 15, 19, and 22 to 25. Withdrawal of the rejections of the claims is therefore respectfully requested.

As further regards all of the obviousness rejections, any Official Notice is respectfully traversed to the extent that it is maintained and it is requested that the Examiner provide specific evidence to establish those assertions and/or contentions that may be supported by the Official Notices under 37 C.F.R. § 1.104(d)(2) or otherwise. In particular, it is respectfully requested that the Examiner provide an affidavit and/or that the Examiner provide published information concerning these assertions. This is because the § 103 rejections are apparently being based on assertions that draw on facts within the personal knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. (See also MPEP § 2144.03).

In sum, it is respectfully submitted that claims 12 to 25 are allowable.

CONCLUSION

In view of the foregoing, it is respectfully submitted that all of the presently pending claims are allowable. It is therefore respectfully requested that the rejections (and any objections) be withdrawn. Since all issues raised have been addressed, an early and favorable action on the merits is respectfully requested.

Respectfully submitted,

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